

MILITARY SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES,
SOCKET RECEPTACLE, ELECTRICAL, POLARIZED
COMPOSITE CONTACT (.100 SPACING)

(C)

This specification inactive for new design
after 1 October 1986

This specification is approved for use within the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the connector described herein shall consist of this specification and the latest issue of MIL-C-55302.

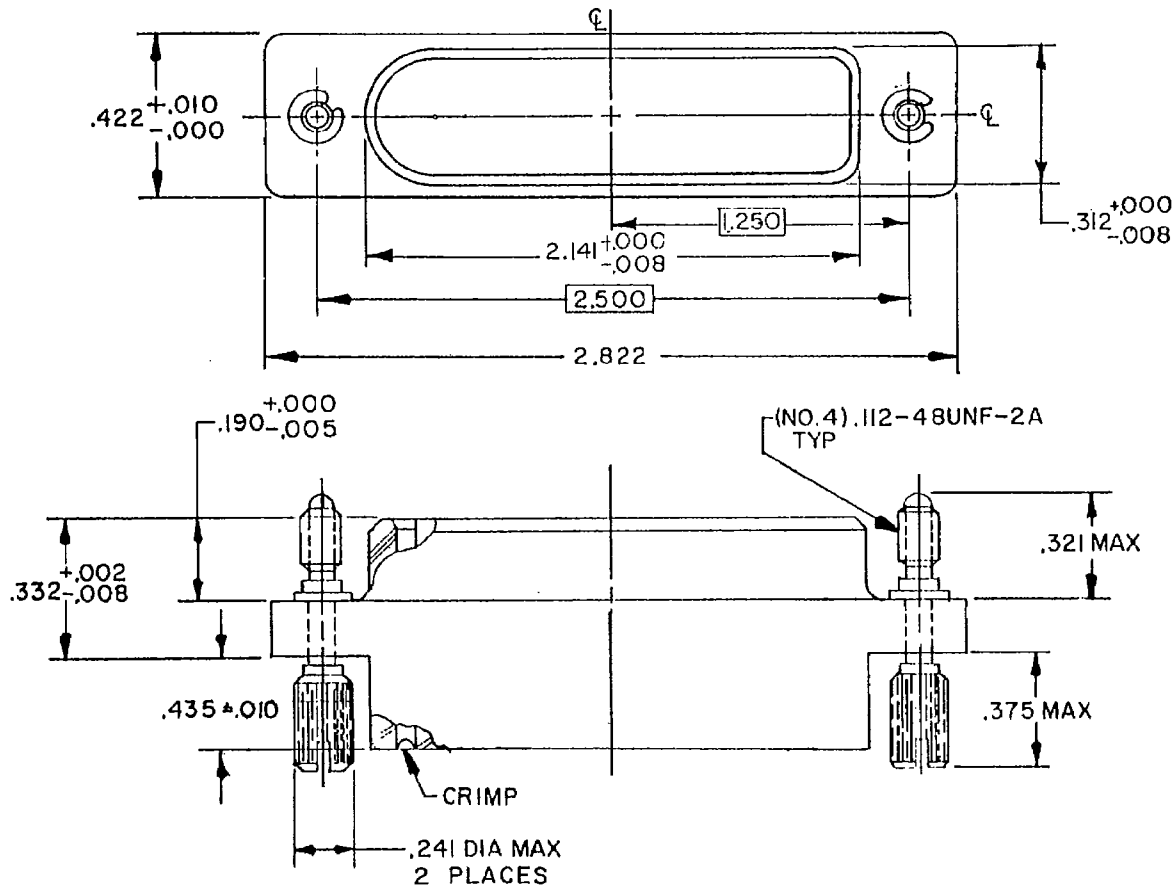


FIGURE 1. Connector, plug, .100 (2.54 mm) contact spacing, removable crimp socket.

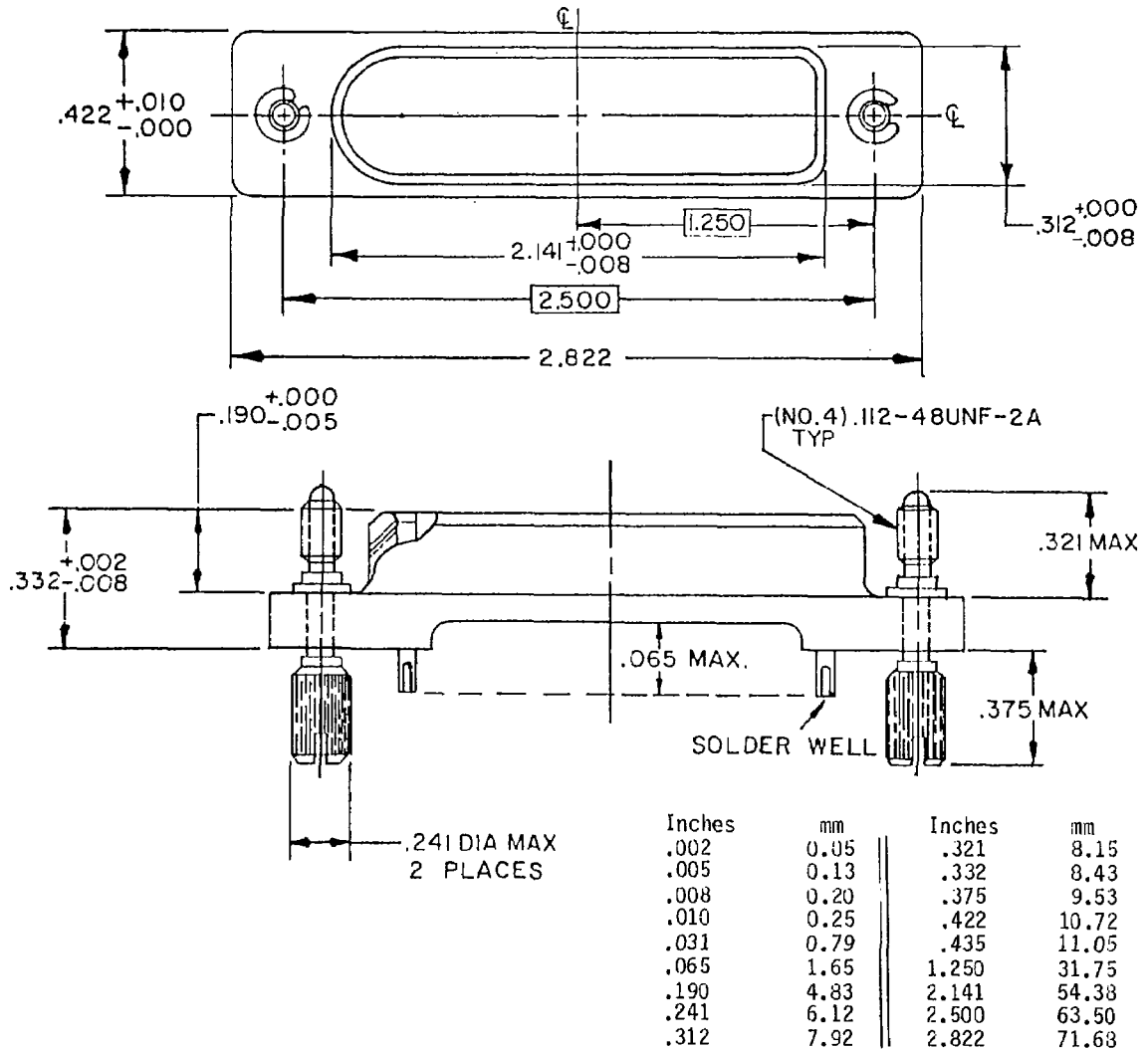
(C) denotes changes

Inches	mm	Inches	mm
.002	0.05	.321	8.15
.005	0.13	.332	8.43
.008	0.20	.375	9.53
.010	0.25	.422	10.72
.031	0.79	1.250	31.75
.065	1.65	2.141	54.38
.190	4.83	2.500	63.50
.241	6.12	2.822	71.68
.312	7.92		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Nominal spacing between any two adjacent socket contacts shall be .100 \pm .003 (2.54 \pm .08 mm).
4. Unless otherwise specified, tolerance is \pm .010 (0.25 mm).
5. A quantity of MS27491-220 socket crimp contacts consisting of the normal complement plus one spare contact for connector arrangements having 26 contacts or less and two spares for arrangements having over 26 contacts shall be supplied with each crimp connector.

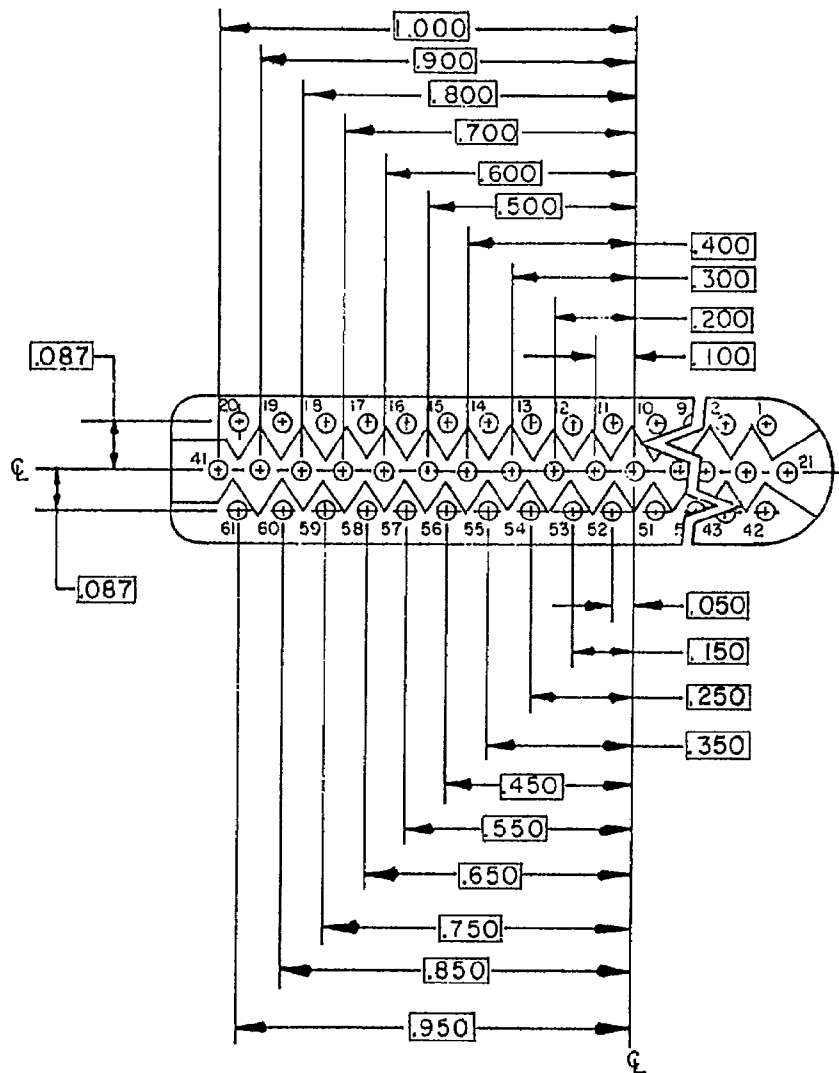
FIGURE 1. Connector, plug, .100 (2.54 mm) contact spacing, removable crimp socket -Continued.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Nominal spacing between any two adjacent socket contacts shall be .100 \pm .003 (2.54 \pm .08 mm).
4. Unless otherwise specified, tolerance is \pm .010 (0.25 mm).

FIGURE 2. Connector, plug, .100 (24.5 mm), contact spacing, solder terminal.



Inches	mm	Inches	mm
.050	1.27	.550	13.97
.087	2.21	.600	15.24
.100	2.54	.650	16.51
.150	3.81	.700	17.78
.200	5.08	.750	19.05
.250	6.35	.800	20.32
.300	7.62	.850	21.59
.350	8.89	.900	22.86
.400	10.16	.950	24.13
.450	11.43	1.000	25.40
.500	12.70		

TABLE I.

Part number	No. of contacts	Type of termination	
71-01	61	Solder Nonremovable	Fig 1
71-02	61	Crimp Removable	Fig 2

NOTE: Contacts 1, 20, and 61 are identified on the front face of the connector and all contacts are identified on the rear face per the insert arrangement.

FIGURE 3. Insert arrangement for contact spacing connectors (Female engaging face)

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Material: In accordance with MIL-C-55302, except: Body - reinforced epoxy resin or equivalent.

- ③ Plating: The contact plating shall be gold in accordance with MIL-G-45024, type II, class 1, grade C over copper in accordance with MIL-C-14550, class 4.

Contact identification: Crimp contact is in accordance with MS27491-220. Contact locations are identified numerically as shown on figure 2.

Mating and unmating: The maximum mating force, in pounds, shall be 0.5 times the number of contacts, and the withdrawal force, in pounds, shall be a minimum of 0.08 times the number of contacts and shall not exceed the measured insertion force.

Contact engagement and separation forces: When specified herein, the engaging and separation forces shall be within the applicable limits specified in table II. Cylindrical steel or tungsten carbide test pins having spherical tips and a surface finish not exceeding 3 microinches roughness for steel pins or 10 microinches for tungsten carbide pins, shall be engaged with and separated from the socket contacts. The forces necessary to insert and withdraw, first the maximum diameter and then the minimum diameter pin shall be measured. The depth of insertion shall be not less than 0.150 inch measured from the face of the insert, but the pins shall not bottom in the sockets for the 71-01 connectors. The depth of insertion shall be not less than 0.205 inch measured from the face of the insert or 0.140 inch measured from the end of the socket body, but the pins shall not bottom in the socket for the 71-02 connectors.

TABLE II. Engaging and separating forces.

Mating end size	Engaging test pin diameter in inches	Maximum engagement force (ounces)	Separating test pin diameter in inches	Minimum separation force (ounces)
22	+0.0002 0.0305 -0.0000	12	+0.0000 0.0295 -0.0002	0.75

Contact resistance: With a test current of 3 A dc, the average resistance of all contact pairs measured shall not exceed 0.010 ohm, and no individual contact pair shall have a resistance exceeding 0.020 ohm.

Oversize pin: The connectors shall exclude a .038 minimum diameter pin.

Dielectric withstanding voltage:

Sea level: 1,300 V rms, 60 Hz, ac.

High altitude: 325 V rms, 60 Hz, ac.

Contact current rating: 3.0 amperes.

Insert arrangement: See figure 3.

Mating connectors: See MIL-C-55302/70.

Quality conformance inspection: (For 71-02 connector only):

Group A inspection: Delete mating and unmating.

Group B inspection: Add mating and unmating.

Part number: M55302/71-(dash number from figure 3).

Custodian:

Air Force - 17

Review activities:

Air Force - 11, 17, 85

DLA - ES

User activity:

Air Force - 19

Preparing activity:

Air Force - 17

Agent:

DLA - ES

(Project 5935-F294-5)